

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the Application:

Claims 1-18 (canceled).

19. (New) A process for making micro-sized chitosan powder comprising the step of spray drying an aqueous suspension of nano-sized chitosan, said micro-sized chitosan powder having a degree of crystallinity below about 1% when fully hydrated and being soluble in water across a pH ranging from about 1 to about 6.3.
20. (New) The process according to Claim 1 wherein the nano-sized chitosan is soluble across a pH ranging from about 1 to about 6.3.
21. (New) The process of Claim 1 wherein said chitosan powder has a moisture content of less than about 20 percent by weight and a concentration of impurities of less than about 12 percent by weight thereof.
22. (New) The process of Claim 1 wherein said chitosan powder has a volume mean particle size ranging from about 5 μm to about 50 μm .
23. (New) The process of Claim 1 wherein said chitosan powder has pores, said chitosan powder having a porosity as calculated by mercury porosimetry ranging from about 0.45 cm^3/g to about 0.8 cm^3/g , and wherein at least 80% by volume of said pores have a radius ranging from about 200 nm to about 5,000 nm.
24. (New) The process of Claim 1 wherein said nano-sized chitosan is produced by a process comprising the steps of:
 - a) forming an aqueous solution of chitosan by dissolving said chitosan in aqueous acid; and,
 - b) partially neutralizing said solution formed in step a) with a neutralizing agent; wherein said partial neutralization is carried out until said chitosan precipitates to form an aqueous suspension of said chitosan; and,
 - c) homogenizing said aqueous suspension of chitosan by high shear.

25. (New) The process of Claim 1 wherein said aqueous suspension of nano-sized chitosan is obtained by a wet milling process.
26. (New) A process for making nano-sized chitosan comprising the steps of wet milling micro-sized chitosan in a mill, said micro-sized chitosan having a mean starting size, said mill comprising an apertured screen and a grinding medium of uniform size, wherein said wet milling comprising at least two size reduction steps wherein the mean size of said grinding medium of a first step of said at least two size reduction steps is at least three times the mean size of the grinding medium of a second step of said at least two size reduction steps and wherein the size of the screen apertures in each successive milling step is smaller than said corresponding mean size of said grinding medium and at least twice said mean starting size of said micro-sized chitosan.
27. (New) The process of Claim 8, wherein said mean size of said grinding medium used at each step is at least about 5 times greater than the initial mean size of said micro-sized chitosan to be milled in each corresponding step.
28. (New) The process of Claim 8 wherein said wet milled chitosan has a mean volume particle size ranging from about 200 nm to about 800 nm.
29. (New) The process of Claim 8 wherein said wet milled chitosan has a molecular weight ranging from about 1,000 Da to about 7,000 Da.
30. (New) The process of Claim 8 further comprising the step of sterilising said micro-sized chitosan powder, said sterilization selected from the group consisting of gamma-irradiation, heat sterilization, and combinations thereof.
31. (New) A method for making an emulsion comprising chitosan, said method comprising the steps of:
- a) pre-forming an emulsion;
 - b) adding chitosan in the form of a powder or suspension; and
 - c) adjusting the pH of said emulsion to solubilize said chitosan.

32. (New) A process for making nano-sized chitosan comprising the step of wet milling micro-sized chitosan particles, said micro-sized chitosan particles having a mean volume particle size of less than 50 μm and less than 5 percent of said micro-sized chitosan particles having a particle size greater than 100 μm .